

Remarks/Arguments:

Claims 1-5, 7-10, 12-16 and 28 are pending. Claims 1-5, 7-10, 12-16 and 28 stand rejected.

Applicants wish to thank the Examiner for the courtesy extended to applicants' represented during the telephone interview of August 19, 2003. During that interview, the independent claims and the application of applicants' figures 1a and 1b and the Haeffling reference were discussed. It was agreed that neither of these references disclose nor suggest that the polymer coating is disposed over at least a portion of a non-polymeric surface of the conical portion of the orifice.

Rejections Under 35 U.S.C. Section 103(a)

The Office Action at page 2, paragraph 3 sets forth "claims 1-5, 7-9, 12-16, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (figure 1a and 1b), and further in view of Haeffling et al (US '854)." Applicant's respectfully submit that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Applicant's invention, as recited in claim (as amended), includes features which are neither disclosed nor suggested by the cited prior art, namely:

...an orifice extending along a longitudinal axis of the body and the working tip and having a conical portion adjacent the working tip...

...a polymer coating disposed over at least a portion of a non-polymeric surface of the conical portion of the orifice. (Emphasis added)

These features are described in applicants' specification, for example, at page 4, line 10 through page 5, line 30.

According to claim 1, the bonding tool has an orifice which extends along the longitudinal axis of the body and the working tip, and has a conical portion adjacent the

working tip. Additionally, the polymer coating is disposed over at least a portion of a non-polymeric surface of the conical portion of the orifice.

The prior art of figure 1a and 1b is relied upon as "[disclosing] a bonding tool for bonding a wire to a substrate having an orifice extending along a longitudinal axis of the body and the working tip and having a conical portion adjacent the working tip." Office Action at page 3. It is readily acknowledged that figures 1a and 1b "fails to teach an orifice along a longitudinal body, a polymer, non-conductive, coating disposed over at least a portion of the surface of the orifice." Haeffling is relied upon as "[disclosing] an orifice along a longitudinal body, a polymer, non-conductive, coating disposed over at least a portion of the surface of the orifice...." Neither Haeffling nor figures 1a and 1b disclose or suggest, however, that the polymer coating is disposed over at least a portion of a non-polymeric surface of the conical portion of the orifice.

In contrast, applicants' invention, as recited in amended claim 1, requires that the polymer coating be disposed over at least a portion of a non-polymeric surface of the conical portion of the orifice.

It is because applicants have included the feature of disposing a polymer coating over at least a portion of a non-polymeric surface of the conical portion of the orifice, that applicants are able to reduce the build up of contamination and thereby increase the wear limits of the bonding tool. Neither the prior of figures 1a and 1b nor Haeffling achieve this advantage because neither of these references have an orifice extending along the longitudinal axis of the body of the bonding tool where the polymer coating is disposed over at least a portion of a non-polymeric surface of a conical portion of the orifice.

For the reasons set forth above, claim 1 is neither disclosed nor suggested by figures 1a and/or 1b and Haeffling and, thus, is likewise not subject to rejection under 35 U.S.C. Section 103(a) as being unpatentable over the prior art of figures 1a and 1b and further in view of Haeffling. Accordingly, applicant's respectfully request that the rejection of claim 1 be withdrawn and the claim allowed.

Although not identical, claims 8 and 28 recite features similar to those of claim 1 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1.

Claims 2-5, 7, 9, and 12-16 depend upon claim 1 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1.

Rejections Under 35 U.S.C. Section 103(a)

Claim 10 stands rejected under 35 U.S.C. Section 103(a) as being unpatentable over the prior art of figures 1a and 1b and further in view of Hadar et al (US 6,171,456). Applicants respectfully submit that this rejection is overcome by the amendments to the claims for the reasons set forth below.

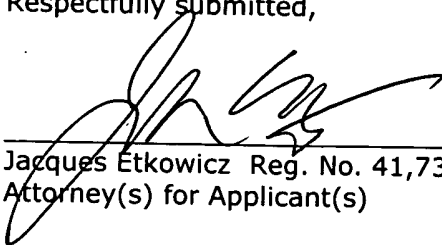
Hadar is relied upon as "[disclosing] a bonding tool having a body, working tip, and an orifice. The orifice has a coating disposed on the surface thereof, and that the coating is about 2 microns thick." Office Action at page 4, paragraph 4. Hadar does not disclose nor suggest, however, that the polymer coating disclosed over at least a portion of a non-polymeric surface of the conical portion of the orifice. Accordingly, applicants respectfully submit that the rejection of claim 10 as being unpatentable over the prior art of figures 1a and 1b and further in view of Hadar et al. should be withdrawn and the claim allowed.

Appln. No.: 09/772,421
Amendment Dated October 1, 2003
Reply to Office Action of July 8, 2003

K&S-101US

In view of the amendments and remarks set forth above, applicant's respectfully submit that this application is in condition for allowance which action is respectfully requested.

Respectfully submitted,



Jacques Etkowicz Reg. No. 41,738
Attorney(s) for Applicant(s)

JLE/erb

Dated: October 1, 2003

☒ P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

☐ P.O. Box 1596
Wilmington, DE 19899
(302) 778-2600

The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. **18-0350** of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

October 1, 2003

Elizabeth Burton



ERB_I:\K&S\101US\AMEND05.DOC